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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,945

06/22/2006

Takemi Matsuno

MEM-002

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32628

7590

10/02/2008

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EXAMINER

DYE, RENA

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

10/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,945	Applicant(s) MATSUNO, TAKEMI	
	Examiner Michael La Villa	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2006 (Prelimin. Amend.).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060622</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
2. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Regarding Claim 8, it is unclear what is the effect of the claimed sequence of steps. It is unclear whether the claimed sequence of steps necessarily results in an article comparable to that of Claim 1 since the claimed steps do not interrelate their respective consequences. For example, it is unclear whether step (2) necessarily requires that the layer described in step (2) is applied, even if not applied directly, to the prepared metal formed article formed by step (1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 1794

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masaoka JP 2003-328151 in view of Tashiro JP 2003-071980. Masaoka teaches an iron substrate that is coated with a zinc layer formed by thermal spraying and further coated with a composition comprising phenol and silicon compound in order to provide corrosion resistance protection. Since the zinc coating is formed by spraying, it would be expected that the resulting layer is porous. See Masaoka (Abstract; paragraphs 9-21). Masaoka does not teach further coating with a fluororesin/organic resin mixture layer. Tashiro teaches a coating material for galvanized steel, including 100 wt. parts of fluororesin and 120 wt. parts of acrylic resin in order to improve corrosion resistance of the steel plate. See Tashiro (Abstract; Claims 1-3; paragraphs 5-27). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the layer of Tashiro to the laminate of Masaoka in order to confer additional corrosion protection to the laminate of Masaoka. Regarding layer thickness ratios and absolute thicknesses, the zinc layer is approximately 3 microns; the phenol/silicon layer is to be 5 to 500 microns; and the fluororesin layer is described as being on the order of 10 microns. It would have been obvious to one of ordinary skill in the art at the time of the invention to select layers having thickness of 3 microns for Zn, 5 microns for phenol/silicon, and 10 microns for

Art Unit: 1794

fluororesin, since these are described as being effective by Masaoka and Tashiro. Layers of these thicknesses meet the claimed thickness ratios.

Regarding Claims 5 and 10, the claimed relative amounts of silicon to phenol are demonstrated in Table 1, Examples 4-7. Regarding Claims 6, 7, 11, and 12, each of Masaoka and Tashiro suggests including lubricant and coloring agent in the resin layers to confer lubricant properties to the outer surface and to confer color to the laminate. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate lubricant and coloring agent in the outer layer of Masaoka in view of Tashiro in order to confer lubricant and coloring properties to the laminate of Masaoka in view of Tashiro. It would have been obvious to one of ordinary skill in the art at the time of the invention to vary the amounts of these additives from close to zero to significant amounts in order to optimize the desired functionality of lubricity and degree of color, which range would include the claimed relative amounts.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone

Art Unit: 1794

number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael La Villa/
Michael La Villa
Primary Examiner, Art Unit 1794
28 September 2008